Amendment to the drawings:

The attached sheet 2/2 of drawings includes changes to Fig. 2. This sheet replaces the original sheet 2/2. In Fig. 2, the abscissa has been clarified.

Attachment: Replacement Sheet

Annotated Sheet Showing Changes

REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 1 ands 3-7 remain in the application. Claim 1 has been amended. Claim 2 has been cancelled.

In item 4 on page 3 of the above-identified Office action, the disclosure has been rejected because of informalities.

More specifically, the Examiner has stated that in Fig. 2 abscissa units are missing. Fig. 2 has been amended to clearly show the abscissa unit.

The Examiner has also stated that the specification, page 6, line 10, refers to terms in the form of adjectives bright surfaces and native oxide layer and it is not clear from the application as to what these terms refer and to how such limitation can be measured. It is noted that the term "bright" is further explained, for example, on page 10, lines 6-8 of the specification. The term "native oxide layer" is well known in the field and has been used in numerous US patent applications (see, for example, US Pat. Applic. Pub. Nos: 2003/0017720 A1 and 2003/0012925 A1).

The Examiner has further stated that the measurement of concentration of μmol/kg should be provided with conversion to the more conventional terms for concentration of parts-per-million (ppm) by weight. Appropriate conversion has been provided.

In item 5 on page 3 of the above-identified Office action, claims 1-7 have been objected to because of informalities.

More specifically, the Examiner has stated that claim 1, line 11, refers to terms in the form of adjectives bright surfaces and native oxide layer and it is not clear from the application as to what these terms refer and to how such limitation can be measured. Please see the discussions above relating to the objection to the disclosure.

In item 6 on page 3 of the above-identified Office action, claims 1-7 have been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement because the claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

More specifically, the Examiner has stated that there is neither adequate description nor enabling disclosure of how and in what manner the limitations of the terms bright surfaces and native oxide layer are to be interpreted and it is not clear from the application as to what these terms refer and to how such limitation can be measured. Please see the discussions above relating to the objection to the disclosure.

In item 7 on pages 4-5 of the above-identified Office action, claims 1-7 have been rejected as being indefinite under 35 U.S.C. § 112, second paragraph.

More specifically, the Examiner has stated that the limitations in claim 1, lines 7-8, and claim 5, lines 1-2 are broader than the enabling disclosure. These rejections are not understood. The disclosure on page 8, lines 5-7 of the specification appears to support the limitation of claim 5, lines 1-2. The support for the limitation in claim 1, lines 7-8 may be found, for example, on page 10, lines 8-10 of the specification.

It is accordingly believed that the claims meet the requirements of 35 U.S.C. § 112, first and second paragraphs. Should the Examiner find any further objectionable items, counsel would appreciate a telephone call during which the

matter may be resolved. The above-noted changes to the claims are provided solely for cosmetic and/or clarificatory reasons. The changes are neither provided for overcoming the prior art nor do they narrow the scope of the claims for any reason related to the statutory requirements for a patent.

In item 8 on page 5 of the above-mentioned Office action, claims 1-4 have been rejected as being anticipated by SU 653953 under 35 U.S.C. § 102(b).

In item 9 on pages 5-6 of the above-mentioned Office action, claims 1 and 3-7 have been rejected as being anticipated by Hettiarachchi (US Pat. No. 5,818,893) under 35 U.S.C. § 102(b).

The rejections have been noted and claim 1 has been amended in an effort to even more clearly define the invention of the instant application. Support for the changes is found in original claim 2.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claim 1 calls for, inter alia:

providing an alcohol that is oxidizable under operating conditions of the primary system;

feeding the alcohol into a primary coolant to establish an alcohol concentration of from 0.1 to less than 10 μmol/kg in a downcomer, the downcomer extending downward at an opening of the feedwater line, with surfaces of the components still being bright or covered only by a native oxide layer.

Hettiarachchi discloses the in-situ palladium doping of stainless steel surfaces of nuclear reactors. However, Hettiarachchi does not disclose the feeding of ethanol in order to form oxidizing radiolysis products on the steel surfaces. The following example of introduction of the alcohol is purely random: in connection with the production of a solution containing palladium acetylacetonate, the acetylacetonate is dissolved in 40 ml of ethanol and then an additional 10 ml of ethanol is added. Finally, it is diluted with water to a volume of 1 l. This solution thus contains altogether 50 ml of ethanol. A concentration of 0.99 mol/l or 990000 μmol/l is obtained with an ethanol density of 0.794 g/l and a mol-weight of 40.07 g/mol. For the test of the palladium doping, this solution is continuously injected into an autoclave in a flow loop so that the palladium has a concentration of 50 ppb. Comparing this concentration with the output concentration of the solution, namely 52.6 mg (=52.6 ppm) of palladium acetylacetonate, a maximum dilution is factor 1000. The alcohol concentration would thus be

maximumly diluted to about 990 μmol/l. See column 9, lines 41-67 of Hettiarachchi. This concentration is much greater than that of the invention of the instant application. In addition, Hettiarachchi does not mention the function of ethanol at all. This material exists purely randomly in the to-be-injected palladium acetylacetonate solution.

In the method according to the invention of the instant application, an oxidizable alcohol is fed into the primary coolant so as to establish a certain alcohol concentration. Thus, the invention of the instant application concerns a continuous feeding of an alcohol. SU 653953 does not disclose such a continuous feeding. Rather, the tests described in the text passages before the table on page 2, clearly show a discontinuous feeding of alcohol.

In addition, according to amended claim 1 of the instant application less than 10 μmol/kg (10^{-5} mol/kg) of alcohol content is necessary. Also, the concentration exists in the inside of the reactor pressure vessel, namely in the region in which the fuel elements are located. However, the lower limit of the known method is 10^{-5} mol/l. When considering that the water heated to the operating temperature has a smaller density than the water at room temperature (for example, 0.749 g/ml at 288 C), the above concentration value is greater than

10^{-5} mol/kg. The invention of the instant application lies in the concentration ranges that are considered by the known methods as having no function at all with regard to the forming of radiolysis products.

Finally, SU 653953 is clearly limited to a heavy water reactor. Otherwise, why should all the tests on page 2 be carried out in a heavy water reactor? The proportions in a heavy water reactor and those in a boiling water reactor with light water working as a moderator and at the same time as a primary coolant have very little in common. Therefore, it is not obvious to apply a known method for a heavy water reactor to a light water reactor.

Clearly, neither SU 653953 nor Hettiarachchi shows "providing an alcohol that is oxidizable under operating conditions of the primary system; feeding the alcohol into a primary coolant to establish an alcohol concentration of from 0.1 to less than 10 μmol/kg in a downcomer, the downcomer extending downward at an opening of the feedwater line, with surfaces of the components still being bright or covered only by a native oxide layer," as recited in claim 1 of the instant application.

Claim 1 is, therefore, believed to be patentable over the art and since claims 3-7 are ultimately dependent on claim 1, they are believed to be patentable as well. Claim 2 has been cancelled.

In view of the foregoing, reconsideration and allowance of claims 1 and 3-7 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate a telephone call so that, if possible, patentable language can be worked out.

Petition for extension is herewith made. The extension fee for response within a period of two months pursuant to Section 1.136(a) in the amount of $450.00 in accordance with Section 1.17 is enclosed herewith.

Please charge any fees which might be due with respect to 37

CFR Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,

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YC

January 5, 2005

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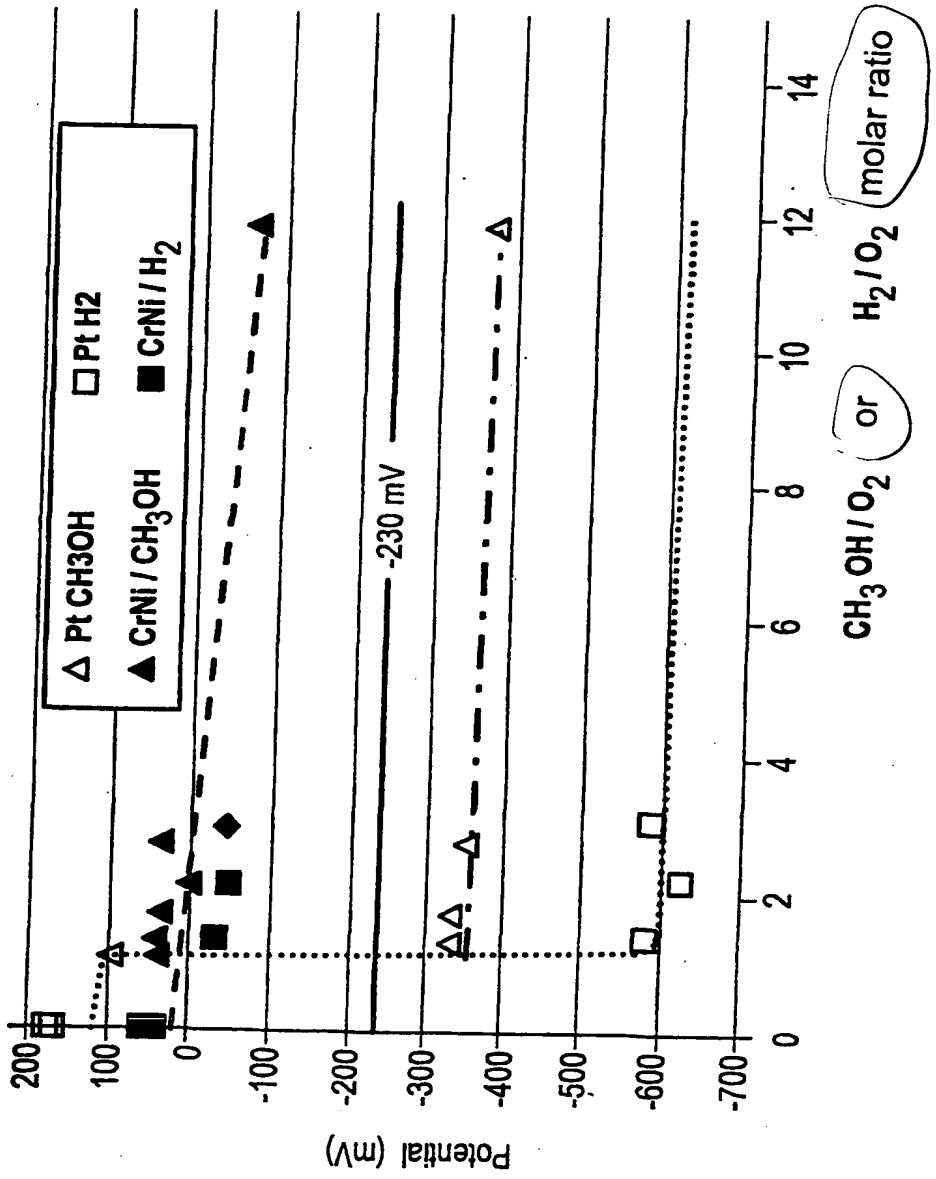

Fig. 2